

Notice of Allowability	Application No.	Applicant(s)	
	10/051,905	AGUAIS ET AL.	
	Examiner	Art Unit	
	Clement B. Graham	3692	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/9/08.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>9/23/08</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>6/24/02</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

/Frantzy Poinvil/
Primary Examiner, Art Unit 3692

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Vereb September 23, 2008.

The application has been amended as follows:

Claim 1 has been replaced by:

-- Claim 1. A no-arbitrage-based system for valuing one or more credit instruments, said system comprising:

- a) a database having a machine readable storage medium for storing credit instrument data;
- b) a first calibration engine connected to said database, wherein said first calibration engine generates calibration parameters from said credit instrument data and current market data, said credit instrument data comprising market data;
- C) a second pricing engine connected to said database and said first calibration engine, wherein said second pricing engine is configured to use said calibration ..parameters to value said one or more credit instruments according to no-arbitrage financial principles, wherein at least one of a net present value and a par-spread is calculated for each of said one or more credit instruments using current market data;
- d) a third engine connected to said second pricing engine for performing simulation-based computations in which a plurality of scenarios are applied to market data to generate a plurality of valuation and exposure measures;
- e) a fourth risk engine connected to said second pricing engine and said third engine for computing a plurality of risk and reward metrics from said valuation and exposure measures; and

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- f) a report generator connected to said fourth risk engine for generating reports for use in managing risk; and
- g) wherein acts performed by said first calibration engine, said second pricing engine said third engine, said fourth risk engine and said report generator are configured to execute on a computer.

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Claim 12 has been replaced by:

- Claim 12. A no-arbitrage-based system for valuing one or more credit instruments, said system comprising:
 - a) a database having a machine readable storage medium for storing credit instrument data;
 - b) a first calibration engine connected to said database, wherein said first calibration engine generates calibration parameters from said credit instrument data and current market data, said credit instrument data comprising market data;
 - c) a second pricing engine connected to said database and said first calibration engine, wherein said second pricing engine is configured to use said calibration parameters to value said one or more credit instruments according to no-arbitrage financial principles, wherein at least one of a net present value and a par-spread is calculated for each of said one or more credit instruments using current market data;
 - d) a third engine connected to said second pricing engine for performing simulation-based computations in which a plurality of scenarios are applied to market data to generate a plurality of valuation and exposure measures;
 - e) a fourth risk engine connected to said second pricing engine and said third engine for computing a plurality of risk and reward metrics from said valuation and exposure measures; and
 - f) a report generator connected to said fourth risk engine for generating reports for use in managing risk, wherein the second pricing engine is configured to produce at least one risk-neutral transition matrix; wherein acts performed by said first calibration engine, said second pricing engine said third engine, said fourth risk engine and said report generator are configured to execute on a computer.

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Claim 16 has been replaced by:

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-- Claim 16. A no-arbitrage-based system for valuing one or more credit instruments, said system comprising:

a) a database having a machine readable storage medium for storing credit instrument data;

b) a first calibration engine connected to said database, wherein said first calibration engine generates calibration parameters from said credit instrument data and current market data, said credit instrument data comprising market data, the first calibration engine having a first module for generating one or more basis instruments from input data relating to said one or more credit instruments, wherein said input data comprises at least one of prices, ratings, sectors, and terms and conditions, a second module for generating a first term structure of risk-free zero prices and a risk-neutral process for interest rates from said one or more basis instruments, a third module for generating one or more basic spread matrices from said one or more basis instruments and said first term structure of risk-free zero prices, a fourth module for generating a second term structure of risk-neutral transition matrices and at least one smoothed credit spread matrix using said first term structure of risk-free zero prices, said module also configured to develop generators using a transition matrix manager, a fifth module for generating a third term structure of risk-neutral transition matrices for a specific named obligor from said at least one smoothed credit spread matrix, said first term structure of risk-free zero prices, and said second term structure of risk-neutral transition matrices, and a sixth module for generating a plurality of spread volatility matrices;

c) a second pricing engine connected to said database and said first calibration engine, wherein said second pricing engine is configured to use said calibration parameters to value said one or more credit instruments according to no-arbitrage financial principles, wherein at least one of a net present value and a par-spread is calculated for each of said one or more credit instruments using current market data, having a first module for defining a state space, a second module for generating a state space by modeling the underlying economic behavior driving the exercise of embedded options and other structural features of said plurality of credit instruments, a third cash flow generation module for generating cash flows for said plurality of credit instruments, whereby said credit instruments may be subject to different prepayment or credit state assumptions, and a fourth module connected to said third cash flow generation module for generating a plurality of valuation attributes from said generated cash flows,

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- d) a third engine connected to said second pricing engine for performing simulation-based computations in which a plurality of scenarios are applied to market data to generate a plurality of valuation and exposure measures;
- e) a fourth risk engine connected to said second pricing engine and said third engine for computing a plurality of risk and reward metrics from said valuation and exposure measures; and
- f) a report generator connected to said fourth risk engine for generating reports for use in managing risk, and
- g) wherein acts performed by said first calibration engine, said second pricing engine said third engine, said fourth risk engine and said report generator are configured to execute on a computer.

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Allowable Subject Matter

- 2. Claims 1-16 are allowable over the prior art of record and as argued by Applicant's representative in their response dated 7/9/2008.

Conclusion

- 3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement Graham whose telephone number is (571) 272-6797. The examiner can normally be reached on Monday-Thursday from 7:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Frantzy Poinvil/
Primary Examiner, Art Unit 3692

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Sept 26, 2008